

Lab on a Chip

Devices and applications at the micro- and nanoscale
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ISSN 1473-0197 CODEN LCAHAM 23(13) 2869–3122 (2023)



Cover

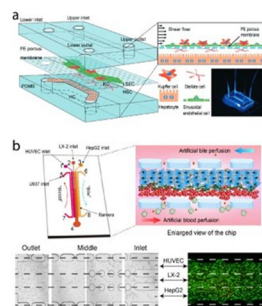
See Jing Wang, Jie Lin, Yong Ren, Aiguo Wu *et al.*, pp. 2922–2941.
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TUTORIAL REVIEWS

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Opportunities and considerations for studying liver disease with microphysiological systems on a chip

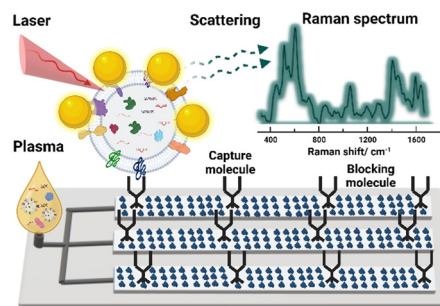
Adiya E. Otumala, Dominick J. Hellen, C. Alessandra Luna, Priscilla Delgado, Anjana Dissanayaka, Chidozie Ugwumadu, Oluwamayokun Oshinowo, Md. Mydul Islam, Luyao Shen, Saul J. Karpen and David R. Myers*



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Emerging integrated SERS-microfluidic devices for analysis of cancer-derived small extracellular vesicles

Long Ngo, Le Que Anh Pham, Anastasiia Tukova, Amin Hassanzadeh-Barforoushi, Wei Zhang and Yuling Wang*



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Lab on a Chip (electronic: ISSN 1473-0189) is published
24 times a year by the Royal Society of Chemistry,
Thomas Graham House, Science Park, Milton Road,
Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of
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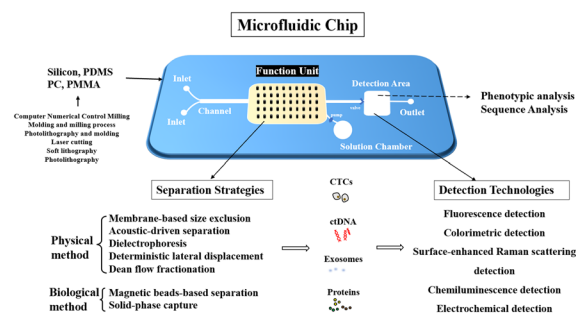


CRITICAL REVIEWS

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Latest advances and perspectives of liquid biopsy for cancer diagnostics driven by microfluidic on-chip assays

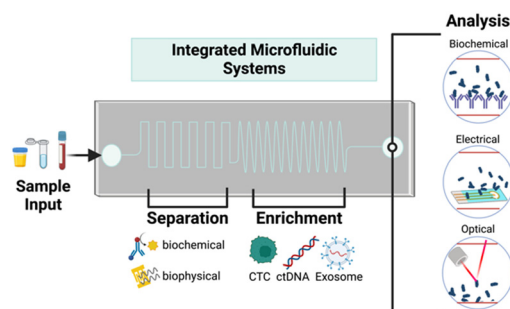
Yujiao Xie, Xiawei Xu, Jing Wang,* Jie Lin,* Yong Ren* and Aiguo Wu*



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Integrated “lab-on-a-chip” microfluidic systems for isolation, enrichment, and analysis of cancer biomarkers

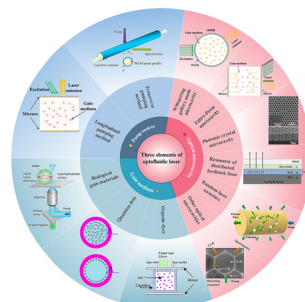
Sushruta Surappa, Priyanka Multani, Ugur Parlattan, Prima Dewi Sinawang, Jussuf Kaifi, Demir Akin and Utkan Demirci*



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Optofluidic lasers and their applications in biochemical sensing

Hongrui Zhang, Ya-nan Zhang,* Like Li, Jiachen Hu, Xuegang Li and Yong Zhao

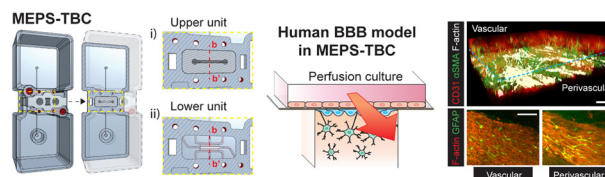


PAPERS

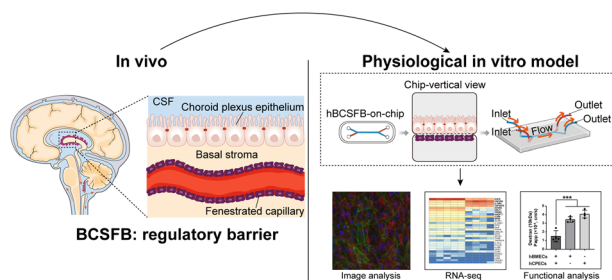
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Manufactured tissue-to-tissue barrier chip for modeling the human blood–brain barrier and regulation of cellular trafficking

Jaehoon Kim, Taehee Yoon, Paul Kim, Mandakh Bekhbat, So Mang Kang, Hoon Suk Rho, Song Ih Ahn and YongTae Kim*



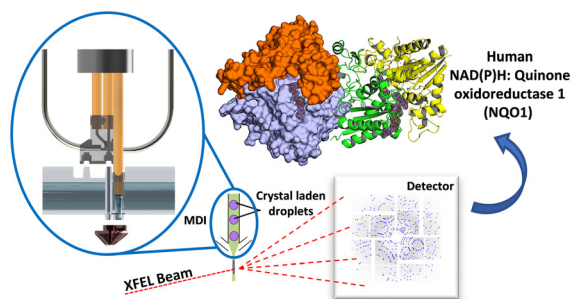
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Bioengineering of a human physiologically relevant microfluidic blood–cerebrospinal fluid barrier model

Ying Zhou, Haowen Qiao, Fang Xu, Wen Zhao, Jibo Wang, Longjun Gu, Pu Chen* and Mian Peng*

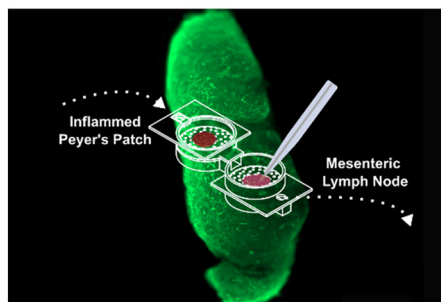
3016



Modular droplet injector for sample conservation providing new structural insight for the conformational heterogeneity in the disease-associated NQO1 enzyme

D. Doppler, J. Martin Garcia,* A. Ros* *et al.*

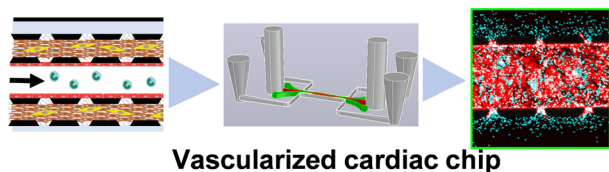
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Open multi-organ communication device for easy interrogation of tissue slices

Lauren M. Delong and Ashley E. Ross*

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Vascularized cardiac chip

Mitigating neutrophil trafficking and cardiotoxicity with DS-IκL in a microphysiological system of a cytokine storm

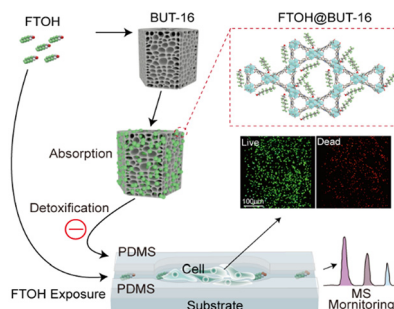
Venktesh S. Shirure, Sergey Yechikov, Bhupinder S. Shergill, Tima Dehghani, Anton V. Block, Harkanwalpreet Sodhi, Alyssa Panitch and Steven C. George*



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In situ investigation of detoxification and metabolic effects of polyfluoroalkyl substances on metal-organic frameworks combined with cell-cultured microfluidics

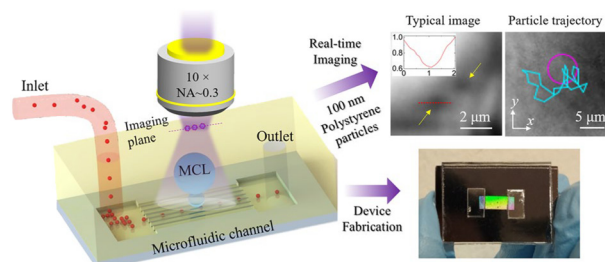
Ning Xu, Haifeng Lin, Qiuling Du, Shujun Dong, Jie Cheng, Peilong Wang* and Jin-Ming Lin*



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Dynamic nano-imaging via a microsphere compound lens integrated microfluidic device with a 10× objective lens

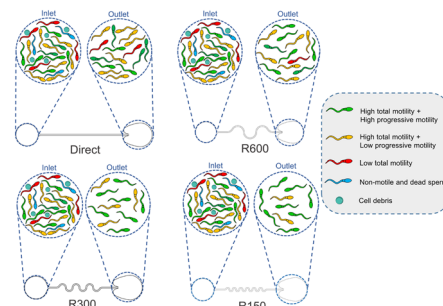
Guangxing Wu, Serene Wen Ling Ng, Yan Zhou and Minghui Hong*



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Development of a novel cervix-inspired tortuous microfluidic system for efficient, high-quality sperm selection

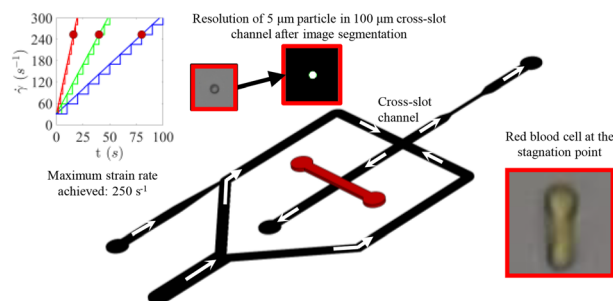
Ehsan Dadkhah, Mohammad Amin Hajari, Seyedamirhosein Abdorahimzadeh, Abdolhossein Shahverdi, Fereshteh Esfandiari, Niloofar Ziarati, Mojtaba Taghipoor* and Leila Montazeri*

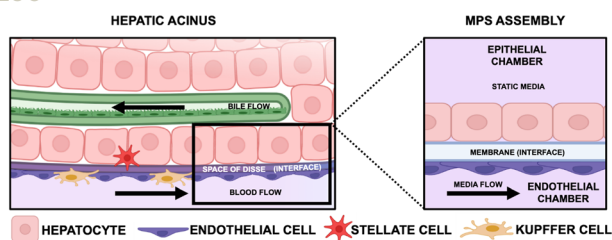


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Characterisation of hydrodynamic trapping in microfluidic cross-slot devices for high strain rate applications

Aravind George,* Farzan Akbaridoust, Nurul A. Zainal Abidin, Warwick S. Nesbitt and Ivan Marusic





Acrylic-based culture plate format perfusion device to establish liver endothelial-epithelial interface

Dennis McDuffie, Charles G. Alver, Bhumi Suthar, Madeline Helm, David Oliver, R. Alan Burgess, David Barr, Emmanuel Thomas* and Ashutosh Agarwal*

